

Midland Solar Applications, LLC
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Testimony of Midland Solar Applications, LLC in Support of PA 295 and Solar Energy for Michigan

Before the Michigan Senate Energy and Technology Committee

Midland Solar Applications is a project developer, designer and installer of photovoltaic solar systems ranging from residential and farms to commercial, industrial and utility scale installations. MSA also owns and operates a 150 kW solar array as part of the Consumers Energy EARP program. MSA has associated companies in Missouri and Texas and has installed PV Solar under Consumers Energy, DTE, Columbia Light and Power (Missouri) as well as outside of utility programs. MSA principles include Steve Ellebracht, Dow R&D Executive who initiated the solar shingle program at Dow Chemical, Dr. Charles (Ted) Skinner, Dow Corning R&D Executive who worked on and lead Si metal projects at Dow Corning, and John Bartos, Founder and President of Three Rivers Construction in Midland for many years. This combination of expertise and experience has served us well in the PV solar installation business.

You have heard from a number of different people on PA 295. We particularly commend to you the testimony of Douglas Jester from 5 Lakes Energy (October 4, 2011) who has made excellent points relative to the benefits of a competitive market for power generation and the anticipated experience curve impact on the cost of renewable energy generation. The recognition of the importance of these two factors for the energy future of Michigan cannot be overstated.

Midland Solar Applications would like to add a project development/design/install perspective as well as that of the investor /owner of independent power generation facilities to the previous testimony. And in particular in our testimony we would like to make a case for increased encouragement of PV solar power generation for Michigan.

From our perspective Solar Power is the likely long term electrical generation winner for the US and Michigan; 1) solar is by far the most environmentally benign and acceptable form of energy generation in every sense (no fuel, no byproducts or effluents, no noise), 2) solar is by far the largest and most widely distributed source of energy, 3) the most cost effective solar installation is on the roof of the user of the power which naturally provides distributed power generation with its cost and reliability advantages.

The benefits of solar for Michigan go well beyond the above mentioned advantages. As mentioned in Mr. Jesters comments Michigan companies already have well over \$4 billion invested in the solar supply chain (more than 20 times wind energy) and with companies like Hemlock Semiconductor, Dow Chemical, Dow Corning and others continuing to invest, there is every reason to believe this investment will continue to grow if a market for PV solar energy generation exists in Michigan.

Some would claim that solar power generation is too expensive to be included in the power generation mix for Michigan at this time. However when the true cost of power generation is considered solar looks much better; 1) solar produces the most power during the day and in the air conditioning season when power generation demand and costs are at their peak, 2) distributed power of solar can greatly reduce distribution capital investment, costs and reliability issues, 3) once solar is installed the costs are almost zero (no fuel and little maintenance) while the costs of current forms of energy generation are expected to continue to increase. Investment in solar power generation would almost certainly result in the lowest long term electrical costs for Michigan while adding substantially to the solar supply chain employment in the State. The competitive market created by PA 295 and a proposed 4% solar RPS carve out would almost certainly result in a continuation of the rapid cost reduction of PV Solar in Michigan.

One of the cost issues in PV solar is that the Federal and state gov'ts have tended to provide funding to large materials and equipment suppliers. This has been successful in that panel prices are going down rapidly. However, the so-called balance of system (project development/design/install) cost reduction has not kept pace and now makes up roughly two thirds of the total PV solar generation system cost. Midland Solar Applications have been successfully working on reducing these costs but the current up and down demand for solar in Michigan (driven by utility programs that come and go) prevent us from realizing the benefits of economies of scale and the experience curve. In addition, compliance with local, state and federal laws and regulations generally requires as much of our time as the project development/design/installation of PV solar here in Michigan. Germany has overcome these issues and thus has been able to reduce the balance of system cost substantially and as a result are enjoying the multiple benefits of low cost solar energy and a healthy solar job market.

PA 295 with its provision of a market for independent renewable energy power producers is an essential first step in the support of a solar industry in Michigan. Other steps that need to follow include:

1. Provision of a 4% solar RPS carve out to provide the economies of scale and the experience curve effect on PV solar energy generation costs and to provide a more stable market for solar in Michigan. It is suggested that the solar carve out start with 1% in 2012 and increase to 4% in 2015 to achieve the above results.
2. Reasonable net metering and interconnection policies are necessary to remove any impediments to independent power generation ownership (Germany's model).
3. Renewable energy regulations should be consistent State-wide and designed to facilitate independent power generation.
4. Extend the renewable energy (Next Energy) personal property tax abatement for 10 years; solar costs are essentially all capital related and current tax rates on personal property would seriously if not fatally impede the development of this energy source.

Thank you for the opportunity to provide our perspectives. Hopefully they can be used for the benefit of Michigan. We would be more than happy to discuss any energy related issues further upon request.

Sincerely,

Charles E. (Ted) Skinner